

## ABSTRACT OF THE DISCLOSURE

A method and apparatus for performing hypothermia of a selected organ without significant effect on surrounding organs or other tissues. A flexible coaxial catheter is inserted through the vascular system of a patient to place the distal tip of the catheter in an artery feeding the selected organ. A chilled perfluorocarbon fluid is pumped through an insulated inner supply conduit of the catheter to cool a flexible bellows shaped heat transfer element in the distal tip of the catheter. The heat transfer bellows cools the blood flowing through the artery, to cool the selected organ, distal to the tip of the catheter.

1. A method for performing hypothermia of a selected organ without significant effect on surrounding organs or other tissues, comprising the steps of: inserting a flexible coaxial catheter through the vascular system of a patient to place the distal tip of the catheter in an artery feeding the selected organ; pumping a chilled perfluorocarbon fluid through an insulated inner supply conduit of the catheter to cool a flexible bellows shaped heat transfer element in the distal tip of the catheter; and the heat transfer bellows cools the blood flowing through the artery, to cool the selected organ, distal to the tip of the catheter.